

DOCUMENT RESUME

ED 326 141

HE 024 043

AUTHOR Johnson, Victoria A.; Chissom, Brad S.
TITLE A Comparison of Core Curriculum Grades for Education and Non-Education Majors at the University of Alabama.
PUB DATE Nov 90
NOTE 14p.; Paper presented at the Annual Meeting of the Mid-South Educational Research Association (New Orleans, LA, November 14-16, 1990).
PUB TYPE Speeches/Conference Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Academic Achievement; Comparative Analysis; *Core Curriculum; *Education Majors; *Grade Point Average; *Grades (Scholastic); Higher Education; Introductory Courses; Nonmajors; Required Courses; Teacher Education; Undergraduate Study
IDENTIFIERS University of Alabama

ABSTRACT

Records for students receiving an undergraduate degree at the University of Alabama were examined, to compare education majors and other majors for grades in similar courses in seven specified curriculum areas: freshman composition, mathematics, humanities, social science, natural science, writing, and computer language or foreign language. The 482 education majors obtained an average grade of 2.66 for the 100 and 200 level core courses, which was the same average grade as that obtained by 4,116 other majors. Education majors had slightly higher grades than other majors in mathematics and social science and slightly lower grades in freshman composition, humanities, natural science, and computer language or foreign language. Education majors had slightly higher mean grades in all core curriculum courses compared to majors in commerce and business administration, communication, and human environmental sciences. Education majors had a slightly lower mean grade in all core curriculum courses compared to majors in arts and sciences, engineering, new college, nursing, and social work. (JDD)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

ED326141

A Comparison of Core Curriculum Grades for

Education and Non-Education Majors at

The University of Alabama

By

Victoria A. Johnson and Brad S. Chissom

The University of Alabama

Paper presented at the annual meeting of the Mid-South

Educational Research Association, New Orleans, LA,

November 14-16, 1990

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

☒ This document has been reproduced as
received from the person or organization
originating it.
☐ Minor changes have been made to improve
reproduction quality.

• Points of view or opinions stated in this docu-
ment do not necessarily represent official
OERI position or policy

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

Brad S. Chissom

2

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

HE 024 043

Abstract

Students majoring in education have been considered by various sources as coming from the lower third of the ability levels of all college students. Claims of this nature are difficult to refute without a common ground from which to make comparisons. The University of Alabama began a core curriculum program in 1983 in which undergraduates throughout the University are required to take similar courses in seven specified curriculum areas. The areas are (1) freshman composition, (2) writing, (3) mathematics, (4) humanities, (5) social science, (6) natural science, and (7) computer language or foreign language. Using the 1st and 2nd level core courses as a basis for comparison, this study compared students majoring in Education with all other undergraduates in the University.

Records for students receiving an undergraduate degree between June, 1987 and June, 1989 were obtained from the registrar's office. Due to the sample size (482-Education Majors and 4116-other majors) only descriptive statistics were used for the data analysis.

Results indicated that education majors obtained an average grade of 2.66 for all 100 and 200 level core courses, compared to the same 2.66 grade for all other majors. Comparisons among six of the seven core areas (writing includes only 300 and 400 level courses) showed education majors were higher in two (Mathematics and Social Science) areas and lower in the other four. Other comparisons are made among major divisions of The University and education.

It seems that Education majors are performing as well as other majors in the core curriculum courses, and charges that inferior students choose education as a major are not well-founded.

Introduction

Students majoring in education have been considered by various sources to be inferior to students majoring in other curriculum areas. Much of the criticism is due to research that used performance on the Scholastic Aptitude Test (SAT) and other entrance examinations as a basis for comparison. This criticism advanced by Feistritzer (1983), Vance and Schlecty (1982), and Weaver (1981) among others is based on results from the SAT and other tests given to high school students who expressed an intent to major in education. It is not certain that these students who indicated a desire to major in education did so, and if they did, whether or not they successfully completed an undergraduate program in education.

An often quoted report, A Nation At Risk (National Commission on Excellence in Education, 1983) makes this statement:

... "Too many teachers are being drawn from the bottom quarter of graduating high school and college students (p. 22)."

Clayton and Bruess (1989), Fisher and Feldmann (1985), Krockover, Mortlock and Johnson (1988) and Matczynski, Siler, McLaughlin, and Smith (1988), all used the quote when discussing the motivation for their studies comparing the performance of education and non-education majors.

An early study by Gallegos and Gibson (1982) at Western Washington University compared Grade Point Average (GPA) changes of education majors over a ten-year period. Grades increased significantly over the period leading the authors to conclude that self-selection was contributing to the increase. A point

raised in the study concerned grade inflation among universities and colleges in general and among education majors in particular. The authors provided an explanation that seemed to eliminate grade inflation as the reason for the change.

Another comparison study was conducted in six colleges and universities in Pennsylvania by Dupuis (1984) in which the reading skills and study habits of education majors were found to be better than national norms. Still, stronger and more convincing research evidence needed to be provided to refute the charge of the academic inferiority of those who major in education.

Studies comparing the performance of education and non-education majors on common measures of performance were conducted by Book, Freeman, and Brousseau (1895) at Michigan State, Barger and Barger at Eastern Illinois and Cohen (1983) for the California State System. Comparison of GPA's and other variables showed that the education majors were, in the words of Book et. al., "as academically competent as their non-teaching counterparts (p. 30)."

One methodological problem in this area of study concerned the comparability of GPA's. Unless the same courses were taken, GPA's are not comparable. Grade inflation is an additional complication. A second problem is the determination of success. Whether or not students were successful in their academic programs must be determined to eliminate individuals who do not graduate or change majors.

A solution to the first problem is to compare education and non-education majors on a set of courses that both groups have taken. The second problem can be solved by using only students who have graduated and certified. Using a common group of courses responds to the criticism that grades in education

courses are too high and that education majors have inflated GPA's. The use of graduates for comparison insures that students used in a study are indeed education majors and not persons who have or will withdraw from their academic program at some point in time.

Studies by Clayton and Bruess at The University of Alabama at Birmingham; Fisher and Feldmann (1985) at Illinois State; Krockover et. al. (1987, 1988) at Purdue, Matczywski et. al. (1988) at Clarion University in Pennsylvania; Nelli (1984) at the University of Kentucky; and Olsen (1985) at Wisconsin-Parkside have all used common courses and graduates to some extent when comparing education and non-education majors. A recent review of the research is given by Matczynski et. al. (1988) and provides an excellent summary of the research methodologies and results. The general finding of all the studies is that education majors do as well as non-education majors on grades made on a set of common courses. These results are based on students who have graduated and/or been certified as teachers, compared to students who have graduated in other fields.

It is difficult to generalize from any single study due to the lack of a common methodology, setting, and other conditions. So most of the studies call for replication, or at least a similar research effort, comparing education and non-education majors in other colleges and universities. This study was prompted by the research of Clayton and Bruess at The University of Alabama at Birmingham which is a member of the same university system as The University of Alabama at Tuscaloosa. Even when institutions in the same system were used it was difficult to replicate the research methodology.

Purpose

This study was designed to answer the question: Are grades of education and non-education majors at The University of Alabama at Tuscaloosa the same? The comparison was made on grades obtained from core curriculum courses that are required of all students, and for only those students who had graduated.

Method

The University of Alabama at Tuscaloosa began a core curriculum program in 1983 in which undergraduates throughout the University are required to take similar courses in seven specified areas. The areas are (1) freshman composition, (2) writing, (3) mathematics, (4) humanities, (5) social science, (6) natural science, and (7) computer language or foreign language. Core courses are generally taken in the freshman and sophomore year before moving into the major area of study, and are designated first and second level (100 and 200) corresponding generally to the year of enrollment in school. Writing was not included in the analysis because courses in writing were at the third and fourth level (300 and 400).

Records for all students receiving an undergraduate degree between June, 1987 and June, 1989 were obtained from the Registrar's Office. Students who graduated in June, 1987 were the first to complete an undergraduate program that included the core curriculum. The total number of education graduates was 482 and the total number of graduates with majors in other fields was 4116.

Due to the large disparity in group size, only descriptive statistics were used. To maintain consistency, only courses that can be used to fulfill the core curriculum requirements taken at The University of Alabama were used in the analysis. However, since courses taken at other institutions can also be used to

fulfill the core curriculum requirements and the courses that fulfill core curriculum requirements can also be used to fulfill other major requirements, the number of courses per graduate varied from 1 to 80. Therefore, rather than using the individual graduates' GPA for the comparison (which would have given equal weight to the GPA of those graduates who earned 1 hour and those who earned 80 hours), the mean grade per course of education majors was compared with the mean grade per course of non-education majors.

The grades of education and non-education majors were compared in three stages: (1) education majors were compared to all non-education majors (combined) in terms of mean grade for all core curriculum courses (combined); (2) education majors were compared to all non-education majors (combined) in terms of mean grade for each area of the core curriculum; and (3) education majors were compared to majors of each of the other undergraduate schools of the University in terms of mean grade for all core curriculum courses (combined).

Table 1 presents the mean grade for all core curriculum courses (combined)

Insert Table 1 about here

for all education majors and all non-education majors (combined). As the table indicates, there is no difference in mean grade per course between the two groups.

Table 2 presents the average grade for each area of the core curriculum for

Insert Table 2 about here

education majors and non-education majors (combined). As the table indicates, education majors have a slightly higher mean grade in mathematics and social science courses than non-education majors. Education majors have a slightly lower mean grade in freshman composition, foreign language/computer language, humanities, and natural science courses than non-education majors.

Table 3 presents the mean grade for all core curriculum courses (combined)

Insert Table 3 about here

for education majors and majors of each of the other undergraduate schools of the University. As the table indicates, education majors have a slightly higher mean grade in all core curriculum courses than majors in Commerce and Business Administration, Communication, and Human Environmental Sciences. Education majors have a slightly lower mean grade in all core curriculum courses than majors in Arts and Sciences, Engineering, New College, Nursing and Social Work.

Discussion

Overall, the results indicate that education graduates are not inferior to non-education graduates when compared on grades made in the same core courses. Additional studies should be conducted for each institution that wants to know how their education graduates compare to others in their institution. The results of this study, and others that are similar, are too specific to the individual situation to be generalized. For a final word of advice, researchers should keep in mind that using a common core of courses and graduates of their academic programs will enhance the quality of their studies.

References

- Barger, J. & Barger, R. (1984). Are teaching certification graduates "Bottom of the Barrell?": Exploring the excellence and exploding the myth. (ERIC Reproduction Document No. ED 248219)
- Book, C., Freeman, D. & Brousseau, B. (1985). Comparing academic backgrounds and career aspirations of education and non-education majors. Journal of Teacher Education, 36(3), 27-30.
- Clayton, G. A. & Bruess, C. E. (1989). A comparison of the grades of education and non-education majors from The University of Alabama at Birmingham, in selected courses. Unpublished report, University of Alabama at Birmingham.
- Cohen, D. (1984). A study of the academic qualifications of students recommended for basic teacher credentials. Unpublished report, California State University Systems.
- Dupuis, M. (1984, Spring). Good sign for education majors. Education (College of Education Alumni News, The Pennsylvania State University), 8,(2), 4.
- Feistritzer, C. E. (Ed). (1983). The American Teacher. Washington, D.C.: Feistritzer Publication.
- Fisher, R. L. & Feldmann, M. E. (1985). Some answers about the quality of teacher education students. Journal of Teacher Education, 36(3), 37-40.
- Gallegos, A. M. & Gibson, H. (1982). Are we sure the quality of teacher candidates is declining? Phi Delta Kappan, 64(1), 33.
- Krockover, G. H., Mortlock, H. & Johnson, B. T. (1987). Comparing success predictors and common core course performance. Action In Teacher Education, 9(1), 61-65.

- Krockover, G. H., Mortlock, H. J. & Johnson, B. T. (1988). The relationship of success predictors to common core course performance for elementary education majors. Teacher Education, 23(3), 13-21.
- Matczynski, T. J., Siler, E. R., McLaughlin, M. L. & Smith, J. W. (1988). A comparative analysis of achievement in arts and science courses by teacher education and non-teacher education graduates. Journal of Teacher Education, 39(3), 32-36.
- Nelli, E. (1984). A research-based response to allegations that education students are academically inferior. Action in Teacher Education, 6(3), 73-80.
- Olsen, D. G. (1985). The quality of prospective teachers: Education vs. noneducation graduates. Journal of Teacher Education, 36(5), 56-59.
- The National Commission on Excellence in Education (1983). A nation at risk: The imperative for educational reform. Washington, D.C.: U.S. Department of Education.
- Vance, V. S. & Schlecty, P. C. (1982). The distribution of academic ability in the teacher force: Policy implications. Phi Delta Kappan, 64(1), 22-27.
- Weaver, W. T. (1981). The talent pool in teacher education. Journal of Teacher Education, 32(3), 32-36.

Table 1

Mean grade for core curriculum courses for education majors
and non-education majors.

Major	Number of Graduates	Number of Courses	Mean Grade (GPA)	Standard Deviation
Education	482	5726	2.66	1.07
Non-Education	4116	55645	2.66	1.08

Table 2

Mean grade for each area of the core curriculum for education majors
and non-education majors.

Education Majors

Area	Number of Courses	Mean Grade	Standard Deviation
Freshmen Composition	450	2.95	.72
Foreign/Computer Language	417	2.81	1.02
Humanities	1493	2.75	1.04
Mathematics	683	2.33	1.30
Natural Science	670	2.36	1.06
Social Science	2013	2.71	1.02

Non-Education Majors

Area	Number of Courses	Mean Grade	Standard Deviation
Freshmen Composition	4643	3.01	.73
Foreign/Computer Language	5322	2.83	1.06
Humanities	14924	2.84	.98
Mathematics	13041	2.31	1.24
Natural Science	5553	2.45	1.03
Social Science	12162	2.70	.97

Table 3

Mean grade for all core curriculum courses for education
majors and majors of each of the other undergraduate
schools of the University.

Major	Number of Graduates	Number of Courses	Mean Grade	Standard Deviation
Education	482	5726	2.66	1.07
Arts & Sciences	923	14380	2.77	1.06
Commerce and Business Administration	1253	16587	2.64	1.06
Communication	666	10989	2.50	1.08
Engineering	620	7754	2.75	1.01
Human Environmental Sciences	251	3376	2.43	1.02
New College	178	1334	2.75	1.12
Nursing	173	1117	2.81	.88
Social Work	52	565	2.70	1.01